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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KERVEROS, JAMES C

ART UNIT

PAPER NUMBER

2138

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,037

Applicant(s)

BARONE, MASSIMILIANO

Examiner

JAMES C. KERVEROS

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 1-14 and 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/29/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is a Non-Final Office Action in response to the instant U.S. Application filed 10/29/2003. Claims 1-22 are pending and presently under examination.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the EUROPEAN PATENT OFFICE (EPO) on 10/30/2002. It is noted, however, that applicant has not filed a certified copy of the 02425660.4 application as required by 35 U.S.C. 119(b).

Claim Objections

Claims 1-14 and 18-22 are objected to because of the following informalities:

The transitional term "characterized in that" recited in passim in claims 1-14 should be changed to "wherein", so as to be consistent with claims 15-22. Appropriate correction is required.

Claims 1 and 18 require indentation. Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(m). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Abou-Samra et al. (US Patent No. 6,416,410) ISSUED: July 9, 2002.

Regarding independent Claims 1, 15, Abou-Samra discloses a compression/decompression method based on pattern and symbol run length encoding for compressing an input file (100, Figure 3) using a compression process (200, Figure 6), comprising

Recognizing a sequence of repetitive data and encoding the sequence of repetitive data of input file (100, Figure 3) using the compression process (200, Figure 6).

As shown in Figure 3, the compressed data structure 300 includes sentinel fields 320 for running-length-encode redundant symbols, and pattern fields 340 are used for running length-encode redundant patterns of symbols. Data fields 360 that do not have a high degree of redundancy are not encoded, but rather, are passed by compression process 200 in unencoded form to avoid the negative compression ratios sometimes associated with run length encoding techniques.

Process 200 uses two passes to compress an input file 100. The first pass (blocks 206-210) is used to detect and encode redundant patterns, thus corresponding to compressible data being made up of a set of bits. The second pass (blocks 212-218)

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is used to identify and separate the redundant from the non-redundant data, thus corresponding to non-compressible data being made up of a set of bits.

As shown in Figure 4, if flag 322 encodes a redundant value (flag =1), then the following field comprises a data field 360 one byte long that contains the symbol to be repeated.

Similarly, according to Figure 5, the data field 360 stores the pattern that is repeated the number of times indicated by "S" field.

Regarding Claims 2-14, 16 and 17, Abou-Samra discloses that the most significant bit of sentinel field 320 as flag 322, and sets the flag to "1" to specify that a redundancy was detected and to "0" to specify the opposite.

Also, if the most significant bit of the sentinel field 320 is set to 1 and the value "S" of the following number field 324 (i.e., next 7 bits from bit 0 to bit 6) is greater than zero, the read file pointer 402 will move to the next byte which will be written `S` times to the target file 100'. If the most significant bit of the sentinel field 320 is set to 0 and the value `S` of the next 7 bits from bit 0 to bit 6 of number field 324 is greater than zero, the read file pointer 402 will move to the next `S` byte while writing their contents to the target file 100' (in other words, the read file pointer 402 will copy the next S bytes to the target file).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abou-Samra et al. (US Patent No. 6,416,410) in view of Rajski et al. (US 6,684,358).

Regarding independent Claims 18-22, Abou-Samra substantially discloses the claimed invention, including the same limitations for the compression/decompression method as described in the independent claims 1 and 15, above.

Abou-Samra does not explicitly disclose an electronic system, comprising a functional device, and a tester coupled to the functional device and operable in combination with the functional device to recognize a sequence of repetitive data from the functional device. In analogous art, Rajski discloses, Figure 2, a test system 30, including an external automatic testing equipment (ATE) tester 21 coupled to a circuit-under-test (CUT) 34. The tester 21 is operable to provide a set of compressed deterministic test patterns to the decompressor/PRPG 36 through tester scan channels 40 and to receive a compressed signature from MISR 42, which compresses the multiple test pattern responses into a signature, and then is sent to the register 43 within the tester 21 for comparison with a reference signature 44 at comparator 45.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the compressed data pattern of Abou-Samra in the external automatic testing equipment (ATE) tester coupled to a circuit-under-test (CUT) as taught by Rajski, for the purpose of testing a circuit-under-test using compressed data pattern, since data compression requires less space than normal data. Also,

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compressing the test response from (CUT) it reduces the data volume of the test response and the time for sending the response to the tester, thus speeding up the testing process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C. KERVEROS whose telephone number is (571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Date: 2 March 2006
Office Action: Non-Final Rejection

JAMES C KERVEROS
Examiner
Art Unit 2138

By:  3/2/06